Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-26. (canceled).

27. (currently amended) A method of generating an output symbol, wherein the output symbol is selected from an output alphabet and the output symbol is such that an input file, comprising an ordered plurality of input symbols each selected from an input alphabet, is recoverable from a set of such output symbols, the method comprising:

calculating, according to a predetermined function, a list AL for each output symbol to be output, wherein AL is an indication of W associated input symbols associated with the output symbol to be output, and wherein weights W are positive integers that vary between at least two values and are greater than one for at least one list; and

generating an output symbol value B from a predetermined function of the associated input symbols indicated by AL for each output symbol to be output;

wherein the ratio of the number of possible output symbols to be output to the number of input symbols in the plurality of input symbols is greater than is needed for any expected signal to noise ratio.

28. (previously presented) The method of claim 27, further comprising:

obtaining a key I for each output symbol to be output, wherein I is unique for each output symbol to be output and the number of possible keys is much larger than the number of input symbols in the input file; and

wherein AL, W and B are calculated using I as an input.

29. (previously presented) The method of claim 28, wherein obtaining key I comprises calculating key I according to a random function or pseudorandom function.

30. (previously presented) The method of claim 28, wherein calculating comprises calculating W(I) according to a random function or pseudorandom function of I.

31. (previously presented) The method of claim 28, wherein calculating comprises calculating AL(I) according to a random function or pseudorandom function of I.

32. (previously presented) The method of claim 28, wherein each subsequent key I is one greater than the preceding key.

33. (previously presented) The method of claim 28, wherein calculating comprises:

calculating, according to a predetermined function of I and a probability distribution, a weight W(I), wherein the probability distribution is over at least two positive integers, at least one of which is greater than one;

calculating a list entry for list AL(I); and

repeating the step of calculating a list entry for list AL(I) until W(I) list entries are calculated.

34. (previously presented) The method of claim 33, wherein calculating W(I) comprises determining W(I) such that W approximates a predetermined distribution over the key alphabet.

35. (previously presented) The method of claim 34, wherein the predetermined distribution is a uniform distribution.

36. (previously presented) The method of claim 34, wherein the predetermined distribution is a bell curve distribution.

37. (previously presented) The method of claim 34, wherein the predetermined distribution is such that W=1 has a probability of 1/K, where K is the number of input symbols in the input file, and W=i has a probability of 1/i(i-1) for i=2,...K.

38. (previously presented) The method of claim 34, wherein the predetermined distribution is such that, given tunable parameters R1 and R2 and K being the number of input symbols in the input file, weight W=1 has a probability proportional to R1/K, weights in a low-weight class ranging from weight W=2 to weight W=K/R2 - 1 have a probability proportional to $1/(W(W-1)(1-W \cdot R2/K))$ and weights in a high-weight class ranging from weight W=K/R2 to weight W=K have a selected probability distribution.

39. (previously presented) The method of claim 27, wherein the predetermined function of the associated input symbols indicated by AL is an exclusive OR (XOR) of the input symbols indicated by AL.

40. (previously presented) The method of claim 27, wherein the input alphabet and the output alphabet are the same alphabet.

41. (previously presented) The method of claim 27, wherein the input alphabet comprises 2^{Mi} symbols and each input symbol encodes Mi bits and wherein the output alphabet comprises 2^{Mo} symbols and each output symbol encodes Mo bits.

42. (previously presented) The method of claim 27, wherein calculating AL comprises:

identifying the number K of input symbols in the input file, at least approximately and a weight W;

determining the smallest prime number P greater than or equal to K;

if P is greater than K, at least logically padding the input file with P-K padding input symbols;

generating a first integer X such that $1 \leq X < P$ and a second integer Y such that $0 \leq Y < P$;

setting the J-th entry in AL to $((Y + (J-1) \cdot X) \bmod P)$ for each J from 1 to W.

43. (previously presented) The method of claim 42, wherein setting the J-th entry in AL for each J comprises:

setting the first entry V[J=0] in an array V to Y;

setting the J-th entry V[J] in the array V to (V[J-1] + X) mod P) for each J from 1 to W minus one; and

using the array V as the list AL.

44. (previously presented) A method of encoding a plurality of output symbols, each according to claim 27, the method further comprising:

generating a key I for each of the output symbols to be generated; and

outputting each of the generated output symbols as an output sequence to be transmitted through a data erasure channel.

45. (previously presented) The method of claim 44, wherein each key I is selected independently of other selected keys.

46. (new) A method of generating an output symbol, wherein the output symbol is selected from an output alphabet and the output symbol is such that an input file, comprising:

an ordered plurality of input symbols each selected from an input alphabet, is recoverable from a set of such output symbols, the method comprising:

calculating, according to a predetermined function, a list AL for each output symbol to be output, wherein AL is an indication of W associated input symbols associated with the output symbol to be output, and wherein weights W are positive integers that vary between at least two values and are greater than one for at least one list; and

generating an output symbol value B from a predetermined function of the associated input symbols indicated by AL for each output symbol to be output; wherein the ratio of the number of possible output symbols to be output to the number of input symbols in the plurality of input symbols is greater than is needed for any expected loss rate of a communications medium.